What is claimed is:

1. A roll stability control system for an automotive vehicle comprising:

an active anti-roll bar system;

a rollover sensing system generating a roll attitude signal indicative of an impending rollover of the vehicle; and

a controller coupled to the active anti-roll bar system and the rollover sensing system, said controller controlling the active anti-roll bar to prevent the vehicle from rolling over in response to the roll attitude signal.

2. A roll stability control system as recited in claim 1 further comprising a brake actuator coupled to the controller, said controller controlling the active anti-roll bar system and the brake actuator to prevent the vehicle from rolling over.

3. A roll stability control system as recited in claim 1 wherein the active anti-roll bar system comprises a front active anti-roll bar.

4. A roll stability control system as recited in claim 1 wherein the active anti-roll bar system comprises a rear active anti-roll bar.

5. A roll stability control system as recited in claim 1 wherein the active anti-roll bar system comprises a front active anti-roll bar and a rear anti-roll bar.

6. A roll stability control system as recited in claim 1 wherein said rollover sensing system comprises a speed sensor, a lateral acceleration sensor, a roll rate sensor, and a yaw rate sensor.

7. A stability control system as recited in claim 1 wherein said controller changes a tire force vector by coordinately changing a roll angle through said active anti-roll bar system, and changing the front brake pressure and the rear brake pressure.

8. A method of operating a roll stability control system for an automotive vehicle having an active anti-roll bar comprising:

determining a roll attitude signal indicative of an impending rollover of the vehicle; and

controlling the active anti-roll bar system to prevent the vehicle from rolling over in response to the roll attitude signal.

9. A method as recited in claim 8 wherein controlling comprises controlling the active anti-roll bar and a brake system to prevent the vehicle

from rolling over in response to the roll attitude signal.

10. A method as recited in claim 8 wherein controlling comprises controlling a front or rear anti-roll bar.

11. A method as recited in claim 8 wherein controlling comprises controlling a front and rear anti-roll bar.

12. A method of operating a roll stability control system for an automotive vehicle having an active anti-roll bar and a brake system comprising:

determining a roll attitude signal indicative of an impending rollover of the vehicle;

when the roll attitude is between a first and second threshold, controlling the active anti-roll bar system to reduce a rolling moment of the vehicle; and

when the roll attitude is above a second threshold, controlling the active anti-roll bar system and the brake system to reduce a rolling moment of the vehicle.

13. A method as recited in claim 12 further comprising determining a wheel lifted condition indicative of a lifted wheel, wherein when the roll attitude is between a first and second threshold, controlling the active anti-roll bar system to reduce a rolling moment of the vehicle comprises when the roll attitude is between a first

and second threshold and a wheel lifted condition exists, controlling the active anti-roll bar system to reduce a rolling moment of the vehicle.

14. A method as recited in claim 12 further comprising when the roll attitude is between said second threshold and a third threshold, said third threshold being less than the second threshold, controlling a brake system alone to reduce a rolling moment of the vehicle.

15. A method of controlling roll stability of an automotive vehicle having a front and rear brake system, and a front and rear active anti-roll bar system comprising the steps of:

determining a roll angle estimate in response to roll sensing system sensors;

controlling a front and rear active anti-roll bar in response to the roll angle estimate; and

controlling a front and rear brake controller in response to the relative roll angle estimate to provide a predetermined tire force vector.

16. A method as recited in claim 15 wherein determining a roll angle estimate comprises:

determining a yaw rate for the vehicle;

determining a roll rate for the vehicle;

determining a lateral acceleration for the vehicle;

determining vehicle speed.

17. A method as recited in claim 15 wherein the step of controlling comprises the steps of determining a roll moment distribution from a brake system and from an active anti-roll bar system.

18. A method as recited in claim 15 wherein the automotive vehicle comprises an antilock brake system generating an antilock brake signal and a traction control system generating a traction control signal, and further comprising the steps of generating a brake actuator signal in response to said rollover signal, said antilock brake signal, and said traction control signal, and generating a front and rear active anti-roll bar control signal in response to said rollover signal, said front and rear active anti-roll bar control signal controlling said front and rear active anti-roll bar actuators and said brake actuator signal controlling said brake actuator to prevent the vehicle from rolling over.

19. An automotive vehicle comprising:

an antilock brake controller generating an antilock brake signal;

a traction controller generating a traction control brake signal;

an active anti-roll bar system having a front active anti-roll bar actuator and a rear active anti-roll bar actuator;

a front brake actuator;

a rear brake actuator;

a roll attitude sensing system for producing a rollover signal in response to an impending rollover of the vehicle; and

a rollover controller coupled to said rollover sensor, said active anti-roll bar system, and said front brake actuator and rear brake actuator, said rollover controller having brake pressure priority logic generating a brake actuator signal in response to said rollover signal, said antilock brake signal, and said traction control brake signal, said controller generating a front and/or rear active anti-roll bar actuator signals in response to said rollover signal, said active anti-roll bar actuator signals controlling said front and/or rear active anti-roll bar actuators and said brake actuator signal controlling said brake actuator to prevent the vehicle from rolling over.

20. An automotive vehicle as recited in claim 19 wherein roll stability control is conducted by sequentially controlling the active anti-roll bar actuators and brake actuators.

21. An automotive vehicle as recited in claim 19 wherein said roll stability controller is conducted by simultaneously controlling the active anti-roll bar actuators and brake actuators so as to achieve a maximum tire lateral force reduction during severe rollovers.